

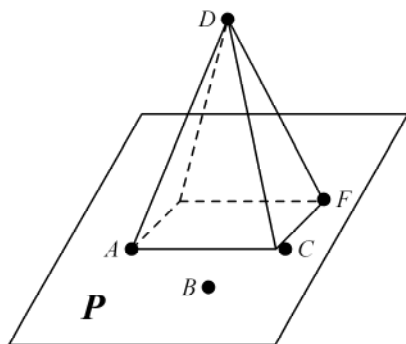
HSCA4-GEOMETRYEOC

Determine whether the conjecture is true or false. Give a counterexample for any false conjecture.

1. Given: $\angle F$ is supplementary to $\angle G$ and $\angle G$ is supplementary to $\angle H$.
Conjecture: $\angle F$ is supplementary to $\angle H$.

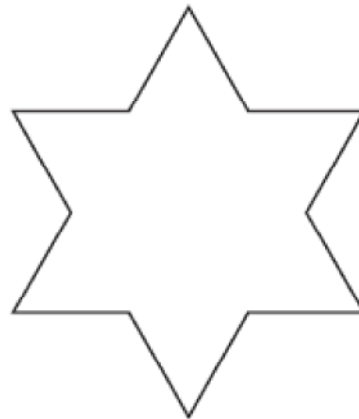
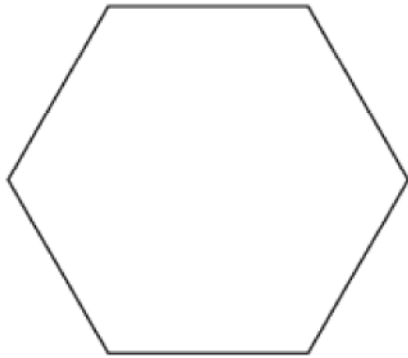
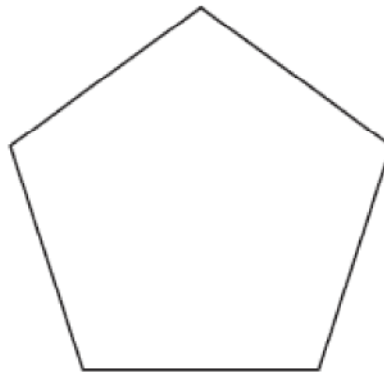
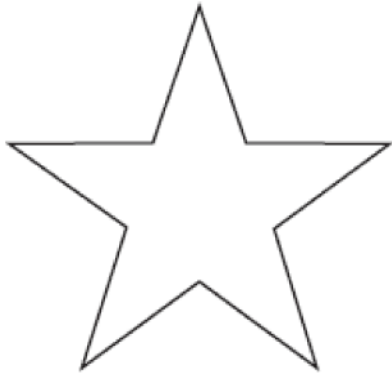
- A. True
- B. False; they could be vertical angles.
- C. False; they could be right angles.
- D. False; they could be congruent angles.

In the figure below, points A , B , C , and F lie on plane P . State the postulate that can be used to show each statement is true.



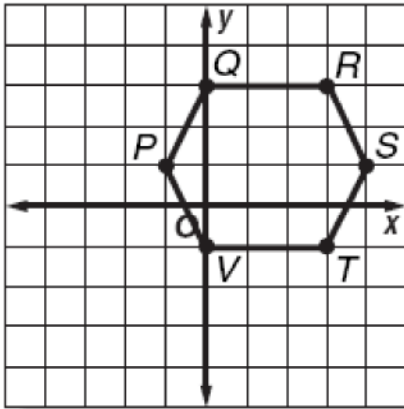
2. A and B are collinear.
- A. A line contains at least two points.
 - B. If two lines intersect, then their intersection is exactly one point.
 - C. Through any two points there is exactly one line.
 - D. If two points lie in a plane, then the entire line containing those points lies in that plane.

3. Courtney starts at point A and walks 5 feet before making a left-hand turn of 72° . She walks another 5 feet before making a right-hand turn of 144° . She repeats this pattern until she returns to point A. What shape has Courtney walked?



4. Find the measure of each interior angle for a regular pentagon. Round to the nearest tenth if necessary.
- | | |
|--------|--------|
| A. 72 | C. 108 |
| B. 540 | D. 360 |
5. One interior angle measurement of a particular regular polygon is 154.3 degrees. How many sides does this polygon have?
- | | |
|-------|-------|
| A. 14 | C. 22 |
| B. 7 | D. 5 |
6. Find the measure of each exterior angle for a regular nonagon. Round to the nearest tenth if necessary.
- | | |
|--------|---------|
| A. 40 | C. 360 |
| B. 140 | D. 1260 |

7. A family visits the Beaumont Botanical Gardens. The group walks along the path and makes 5 right turns before returning to the starting point. The relationship between a , the number of angles turned, to s , the number of sides of the figure walked, is $a = s$. What is the shape of the family's path?
- A. rectangle
B. hexagon
C. square
D. pentagon
8. Which pairs of line segments contain parallel sides on the hexagon below?



- A. \overline{RS} and \overline{ST}
B. \overline{PQ} and \overline{ST}
C. \overline{PQ} and \overline{RS}
D. \overline{PQ} and \overline{QR}